

What is claimed is:

1 1. A brushless motor for a bicycle comprising:
2 a plurality of ferromagnetic steel elements,
3 annularly disposed on the wheel; and
4 a plurality of electromagnets connected to the body,
5 each electromagnet provides an opening through
6 which the wheel travels, wherein when the wheel
7 rotates, at least one steel element is
8 magnetically charged, and the electromagnets
9 attract at least one steel element to pass
10 through the gap, maintaining wheel rotation.

1 2. The brushless motor as claimed in claim 1,
2 wherein the wheel has a rim, the steel elements are
3 secured on the rim.

1 3. The brushless motor as claimed in claim 1,
2 further comprising:
3 a battery electrically connected to the
4 electromagnets and disposed on the main body.

1 4. The brushless motor as claimed in claim 3,
2 wherein the steel elements are disposed on the rim with
3 the same first angular intervals, the electromagnets are
4 disposed on the main body with the same second angular
5 intervals, and the first angular intervals are not equal
6 to the second angular intervals.

1 5. The brushless motor as claimed in claim 4,
2 wherein the ratio of the first angular intervals and the
3 second angular intervals is 3:2.

1 6. A motor-driven bicycle, comprising:

2 a main body;

3 a main body with at least one wheel thereon;

4 a plurality of ferromagnetic steel elements,
5 annularly disposed on the wheel; and

6 a plurality of electromagnets connected to the body,
7 each of the electromagnets provides an opening
8 through which the wheel travels, wherein when
9 the wheel rotates, the steel elements pass
10 through the opening.

1 7. The motor-driven bicycle as claimed in claim 6,
2 wherein the wheel has a rim, the steel elements are
3 secured on the rim.

1 8. The motor-driven bicycle as claimed in claim 6,
2 further comprising:

3 a battery electrically connected to the
4 electromagnets and disposed on the main body.

1 9. The motor-driven bicycle as claimed in claim 9,
2 wherein when the wheel is rotates, at least one steel
3 element is magnetically charged, and the electromagnets
4 attract at least one steel element to pass through the
5 opening, maintaining wheel rotation.

1 10. The motor-driven bicycle as claimed in claim 9,
2 wherein the steel elements are disposed on the rim with
3 the same first angular intervals, the electromagnets are
4 disposed on the main body with the same second angular

5 intervals, and the first angular intervals are not equal
6 to the second angular intervals.

1 11. The motor-driven bicycle as claimed in claim
2 10, wherein the ratio of the first angular intervals and
3 the second angular intervals is 3:2.